

**I-10.01 Policy**

All major highway construction projects will normally undergo three plan reviews from the outset of the preliminary design stage to completion of the final plans. These reviews are as follows:

Preliminary Plan Review  
Plans, Specifications, and Estimates (PS&E) Plan Review  
Final Office Review

The Preliminary Plan Review and PS&E Plan Review will normally be conducted with a formal meeting at a location which will provide the opportunity for an on-site review of the project location. On minor projects the PS&E Plan Review may be conducted informally by mailing out the plans to the participants and requesting written comments. The on-site visits are commonly called field reviews.

Resurfacing, Restoration, and Rehabilitation (3R) projects should have a minimum of one field or office review. This review would place emphasis on safety, existing geometrics of roadway section, identifying possible alternates for consideration, and other special concerns such as access, farmsteads, railroad crossings, major highway junctions, and other features that may be appropriate.

For projects of a smaller scale, such as seals, signing, guardrail, and SAP projects, the requirements for field reviews should be made on a case-by-case basis.

**I-10.02 Preliminary Plan Review**

This review should be conducted at a time when the plans have progressed sufficiently, 25% to 40% complete, to allow for proper review of the following design features by the designer and the accompanying members of the review team.

- **Horizontal and Vertical Alignments:** The preliminary alignments should be established and a preliminary earthwork summary is available to allow the evaluation of the geometry, drainage, borrow requirements, etc. The earthwork summary should indicate end areas, volumes, and limits or tie points of the cut and fill slopes.
- **Borrow:** Special emphasis should be given to evaluating borrow requirements, identifying possible locations for sources of borrow, and optimizing utilization of material from the existing highway right of way.
- **Access:** The existing and future access needs should be evaluated. Access points should be established to the fullest extent possible, subject to concurrence by the

Design Engineer and by the landowner, when contacted by a representative from the Design Division - Right of Way Section.

- **Right of Way:** The existing right of way and need for new right of way, permanent sight easements, permanent drainage easements, temporary construction easements, etc. should be evaluated.
- **Utilities:** An effort should be made to identify and locate those utilities within the project area prior to conducting this review. The type and location of the utilities should be evaluated and recommendations for the necessary adjustments determined. The designer should note any utilities not identified on the survey. If utilities are found in the field, the designer should coordinate additional surveying to update plans as necessary.
- **Safety Improvements:** The safety review should be evaluated to determine or verify any special conditions that may need to be addressed in the final design.
- **Drainage Improvements:** The drainage features should be evaluated to determine or verify any special conditions that may need to be addressed in the final design.
- **The Bridge Division or lead structural designer** will normally conduct a Type, Size, and Location (TS&L) inspection for the proposed structures located within the project limits. The TS&L review is discussed in Section V-02.06.
- **Constructability Issues:** The design should be evaluated for any constructability issues or special conditions that may need to be addressed in the design, construction phasing, schedule, etc.

### **Coordination**

A Preliminary Plan Review Checklist is provided in Appendix III-01 A.

The designer assigned to the project will be responsible for all coordination required in scheduling, transportation, notification of participants, and preparation of final reports and resolution of comments.

Review participants should be identified from the Plan Review Notification and Attendance Chart in Section I-10.05.

The designer should coordinate appropriate transportation to allow for proper input from the various members of the review team. The use of small cars and splitting the review team into two or more groups has not resulted in effective reviews.

Copies of the plans will be made available to all members of the review team a minimum of five working days prior to the date of the review.

The designer will be responsible to record all significant comments, questions, and items requiring further study or resolution and prepare a preliminary plan review report. The report will be submitted to the Design Engineer and Bridge Engineer. After all comments have been resolved to the fullest extent possible, distribution will be made to all participants of the preliminary plan review and others if required. Any issues not resolved between any division and/or district; or any issues that are considered a change in scope of work or increased cost compared to the approved project concept report, will be referred to the Director - Office of Project Development and Deputy Director for Engineering.

### **I-10.03 Plans, Specifications, and Estimates (PS&E) Plan Review**

This review should be conducted when the plans are 80% to 95% complete, or approximately one month prior to the scheduled plan completion date. This review should provide for proper review of the design features and plan sheets by the designer and the accompanying members of the review team, and allow sufficient time for the designer to make the necessary plan revisions.

All projects should have a PS&E Plan Review. The review will be either a formal on-site review or an informal review with plans mailed out for written comments. Generally, all grading, urban, and major resurfacing projects will have formal, on-site review. Minor resurfacing projects, small safety projects, and seal projects would normally be mailed out for written comments. If there is any doubt as to the need for a formal or informal review, the designer should contact the District Engineer for his recommendation.

If the review becomes dated more than one year due to adjustments in the bid opening schedule, a follow up review will be conducted.

This review is very important and should include all the major components of the plan sheets and project proposal as follows:

- Title Sheet
- Note Sheets.
- Quantity Sheets
- Detail Sheets
- Typical Section Sheets
- Plan and Profile Sheets
- Work Zone Traffic Control Sheets
- Signing, Marking, Guardrail, Lighting, and Signal Sheets
- Structural Sheets
- Cross Section Sheets
- Special Provisions

- Cost Estimates
- Recommendations for contract completion date or guaranteed number of working days.

**Coordination**

A PS&E Review Checklist is provided in Appendix III-01 A.

The designer assigned to the project will be responsible for all coordination required in scheduling, transportation, notification of participants, and preparation of final reports and resolution of comments.

Review participants should be identified from the Plan Review Notification and Attendance Chart in Section I-10.05.

The designer should coordinate appropriate transportation to allow for proper input from the various members of the review team. The use of small cars and splitting the review team into two or more groups has not resulted in effective reviews.

Copies of the plans will be made available to all members of the review team a minimum of five working days prior to the date of the review.

The designer will be responsible to record all significant comments, questions, and items requiring further study or resolution and prepare a PS&E plan review report. The report will be submitted to the Design Engineer and Bridge Engineer and after all comments have been resolved to the fullest extent possible, distribution will be made to all participants of the PS&E review. Any issues not resolved between any division and/or district; or any issues that are considered a change in scope of work or increased cost compared to the approved project concept report, will be referred to the Director - Office of Project Development and Deputy Director for Engineering.

**I-10.04 Final Office Review**

This review should be conducted when the plans are 95% to 100% complete. This review should provide for final review of the plans prior to submitting for signature and processing with the Planning and Programming Division.

A Final Office Review will be conducted by the lead designer(s) and supervisor(s) that participated in the design of the project.

It is recommended that all plans should be checked prior to this review and submission to the Planning and Programming Division. A person other than the designer should check and review the plans.

This review will be coordinated through the Design Engineer or District Engineer, and planned so as to allow for the construction project engineer to be available for the review.

Special emphasis will be given, but not limited to, the following considerations:

- Review of PS&E Comments
- Plan Development Checklist
- Review of Project Concept Report
- Conformance to NDDOT Specifications and Standards
- Quality of Construction
- Suggested Improvements to Design Features

This review will be followed up with a project memorandum providing, in detail, any findings of significance. This report will be submitted to the Design Engineer and Director - Office of Project Development when the project plans are submitted for signature.

### **I-10.05 Plan Review Notification and Attendance Chart**

Representative	Preliminary Plan Review		PS&E Plan Review		Final Office Plan Review	
	Notify	Attend	Notify	Attend	Notify	Attend
FHWA	AA	AA	AA	AA	AA	AA
District	A	A	A	A	AA	AA
Construction Services	A	AA	A	A	A	AA
Design // Design Engineer	A	NR	A	AA	A	AA
Design // Prgm Managers	A	A	A	A	A	A
Design // Designer (a)	A	A	A	A	A	A
Design // Traffic Section	A	AA	A	AA	A	AA
Design // R/W	AA	AA	AA	AA	AA	AA
Design / Cult Resources	A	AA	AA	AA	NR	NR
Materials & Research	A	A	A	A	A	AA
Bridge	AA	AA	AA	AA	AA	AA
Local Government (b)	AA	AA	AA	AA	NR	NR
City (b)	AA	AA	AA	AA	NR	NR
Planning & Programming	AA	AA	AA	AA	NR	NR
Traffic Operations	AA	AA	AA	AA	NR	NR
Project Development	NR	NR	A	A	A	A
Technical Support	A	A	A	A	A	A
Maint & Engr Services	A	AA	A	AA	NR	NR

Legend:      A = Always                      AA = As Appropriate                      NR = Not Required

Urban and Regional Projects:

    (a) Designer from Design Div or Consultant

    (b) Urban and regional projects

**I-10.06 Plan Review and Design Development Checklists**

The following checklists are provided in Appendix III-01 A:

- Preliminary Plan Review Checklist
- PS&E Plan Review Checklist
- Final Office Review Checklist
- Plan Design and Development Checklist - General
- Plan Design and Development Checklist - Traffic Control Design (Signing, Pavement Marking, Guardrail, Lighting, Traffic Signals)